

### **In the Claims:**

Claims 1-9 (cancelled).

Claim 10 (new): A method of providing a food supplement or product for enhancing the production of short chain fatty acids and particularly propionic acid and/or propionates in the colon of a human or other animal based upon the choice of strains of propionibacteria able to stimulate and/or increase said production, said method comprising:

- a) Identifying a selected strain or strains from a plurality of propionibacteria by:
  - i. subjecting a predetermined quantity of bacteria of each of said strains to stress in a bile environment of a predetermined strength for a predetermined period or periods of time;
  - ii. incubating stressed propionibacteria of each of said strains for a predetermined period or periods of time to provide a yield of propionic acid and/or propionates;
  - iii. selecting as said selected strain or strains one or more of said strains which have a yield of propionic acid and/or propionates at or above a selected level of yield;
- b) utilizing propionibacteria belonging to said selected strain or strains in providing a food supplement or product or by incorporating said propionibacteria in a food supplement or product.

Claim 11 (new) : The method as recited in Claim 10, wherein said predetermined quantity of said propionibacteria is in a stationary stage of growth when subjected to said bile environment.

Claim 12 (new) : The method of Claim 10, wherein the food supplement or product is capable of favouring the assimilation of principal minerals of one or more calcium and/or iron and/or zinc and/or magnesium at the colon.

Claim 13 (new) : The method of Claim 10, wherein the food supplement or product has antifungal properties at the colon, and in particular is capable of reducing development of pathogenic mycosis germs of the candida/thrush type.

Claim 14 (new) : The method of Claim 10, wherein the selected propionibacteria have properties of adhesion on the colonocytes.

Claim 15 (new) : The method of Claim 10, wherein the food supplement or product is in the form of a dry or hydrated preparation as individual fractions of approximately 100 mg to 1 g, containing at least  $10^6$  cells of propionibacteria so as to be suitable for being ingested per day.

Claim 16 (new) : The method of Claim 10, wherein the food supplement or product is in the form of a dry or hydrated daily preparation, containing at least  $10^8$  cells of propionibacteria suitable for being ingested per day.

Claim 17 (new) : The method of Claim 10 wherein said food supplement or product is characterized in that it can be utilized in a manner to be protected at least partially from stomach acidity.

Claim 18 (new) : The method of Claim 17, wherein food supplement or product is provided in the form of gastro-resistant capsules as a means of protecting said propionibacteria.

Claim 19 (new) : The method of Claim 10, wherein the food supplement or product is provided in the form of a formulated preparation with the propionibacteria being added to or associated with a fermentable substrate which comprises dietary fibers.

Claim 20 (new) : The method of Claim 10, wherein the food supplement or product is provided in the form of a formulated preparation with the propionibacteria added to or incorporated into liquid, paste or solid foods.

Claim 21 (new) : The method as recited in Claim 10, wherein the food supplement or product is provided in the form of a food supplement or product which comprises lactic bacteria and/or bifid bacteria.

Claim 22 (new) : The method as recited in Claim 10, wherein said selection of a strain or strains of propionibacteria comprises the cultivation of said bacteria for at least two days at about 30°C in a YEL (Yeast Extract Lactate) medium.

Claim 23 (new) : The method as recited in Claim 10, wherein the selection of a strain or strains of said propionibacteria comprises to stress said propionibacteria by putting said bacteria in a YEL medium containing bovine bile and incubating each of said bacteria in said medium for a period of time.

Claim 24 (new) : The method as recited in Claim 23, wherein the said propionibacteria belonging to strain or strains are separated from the YEL medium containing bile by centrifuging the propionibacteria.

Claim 25 (new) : The method as recited in Claim 10, wherein the propionibacteria belonging to strain or strains are identified by setting a basic standard of yield for the selected strain or strains based on their ability to produce a yield of at least about two g/l propionic acid and/or propionates where said standard is set by each strain or strains being processed as follows:

- a) cultivating for at least two days propionibacteria belonging to one or various strains at 30°C in a YEL medium, said medium containing approximately 11.4 g/l of lactate;
- b) diluting said propionibacteria belonging to said strain or strains to 1/10<sup>th</sup> in a YEL medium containing 0.6% bovine bile;
- c) incubating said propionibacteria belonging to said strain or strains at 37°C for 90 minutes;
- d) centrifuging said propionibacteria belonging to said strain or strains;
- e) taking up said propionibacteria to said strain or strains in a YEL medium containing approximately 11 g/l of lactate,
- f) incubating said propionibacteria belonging to said strain or strains at 37°C for 24 hours;
- g) selecting from said propionibacteria belonging to said strain or strains the strain or strains which produce at least 2 g/l of propionic acid and/or propionates.

Claim 26 (new) : The method of Claim 25 wherein the selected propionibacteria belonging to said strain or strains is or are the strain or strains which produce at least about 4 g/l of propionic acid and/or propionates.

Claim 27 (new) : A method of providing a food supplement or product comprising propionibacteria for enhancing the production of short chain fatty acids and particularly propionic acid and/or propionates in the colon of a human or other animal based upon the selection of a strain or strains of propionibacteria able to stimulate and/or increase said production, said method comprising:

- a) establishing a basic acceptability standard by which a strain or strains of propionibacteria can be evaluated for being acceptable for use in said method, said acceptability standard being a production of at least about 2 g/l of propionic acid and/or propionates, when the following basic acceptability standard steps are followed, namely:
  - i. a first step of cultivating for at least two days propionibacteria belonging to a strain or a plurality of strains at 30°C in a YEL medium, said medium containing approximately 11.4 g/l of lactate;
  - ii. a second step of diluting said propionibacteria belonging to said strain or plurality of strains to 1/10<sup>th</sup> in a YEL medium containing 0.6% bovine bile;
  - iii. a third step of incubating said propionibacteria belonging to said strain or plurality of strains at 37°C for 90 minutes;

- iv. a fourth step of centrifuging said propionibacteria belonging said a strain or plurality of strains;
  - v. a fifth step of taking up said propionibacteria belonging to said strain or plurality of strains in a YEL medium;
  - vi. a sixth step of incubating said propionibacteria belonging to a strain or plurality of strains at 37°C for 24 hours;
  - vii. a seventh step of ascertaining the yield of propionic acid and/or propionates to determine if the basic acceptability standard about 2 g/l is met.
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- b) providing a strain or a plurality of strains of propionibacteria;
  - c) subjecting a predetermined quantity of said propionibacteria belonging to a strain or plurality of strains to stress in a bile environment of a predetermined strength for a predetermined period or periods of time;
  - d) incubating each propionibacteria of said strain or strains for a predetermined period or periods of time to provide a yield of propionic acid and/or propionates;
  - e) ascertaining the amount of yield of propionic acid and/or propionates and on the basis of said amount of yield and selecting the strain or strains which if subjected to the basic acceptability standard steps would meet the basic acceptability standard of at least about 2 g/l of propionic acid and/or propionates;
  - f) utilizing said selected propionibacteria belonging to a strain or strains in providing a food supplement or product or by incorporating said selected strain or strains in a food supplement or product.

Claim 28 (new): A method of providing a composition which may be a food composition or a dietary composition or a medicinal composition absorbable by man or animal, said method comprising:

- a) selecting propionibacteria belonging to non very autolytic strains and selected for their ability to produce at least 2 g/l propionic acid and/or propionates after being cultivated at 30°C in a YEL medium containing approximately 11.4 g/l lactate for two to three days, then 1/10<sup>th</sup> diluted in this YEL medium with 0.6% bovine bile added, incubated at 37°C for ninety minutes, centrifuged, returned to the YEL medium and again incubated at 37°C for twenty-four hours, to obtain a food composition or a dietary composition or a medicinal composition absorbable by man or animal, developed so that the bacteria are protected at least partially in regard to gastric acidity, containing at least 10<sup>6</sup> cells per gram of these bacteria, whereby said bacteria that are selected is able to stimulate and significantly increase the synthesis of propionic acid and/or propionates and if the need arises acetic acid and/or acetate in the colon by anaerobic bacterial fermentation;
- b) utilizing the selected propionibacteria to obtain a food composition or a dietary composition or a medicinal composition.

Claim 29 (new): The method according to Claim 28 wherein the composition is characterized in that it favours the assimilation of the mineral substances, in particular calcium and/or iron and/or zinc and/or magnesium in the colon.

Claim 30 (new): The method of Claim 28, wherein the composition has anti-fungal properties in the colon and, in particular, likely to reduce the development of pathogenic mycoderms of the candida / thrush type.

Claim 31 (new): The method of Claim 28, wherein selected propionibacteria belong to strains having adhesion properties on the colonocytes.

Claim 32 (new): The method of Claim 29, wherein the composition is composed of a dry or hydrated preparation being in the form of individual fractions of approximately 100 mg to 1 g, including preferably at least  $10^6$  cells.

Claim 33 (new): The method of Claim 32, wherein the fractions are approximately 200 to 500 mg.

Claim 34 (new): The method of Claim 32, wherein the composition is in the form of gelatine capsules or gastro-resistant capsules.

Claim 35 (new): The method of Claim 28, wherein the composition is composed of a development preparation, the propionibacteria being added to or combined with a fermentable substrate.

Claim 36 (new): The method of Claim 35, wherein said fermentable substrate comprises dietary fiber.



Claim 37 (new): The method of Claim 28 wherein the composition is composed of a developed preparation, the propionibacteria being added or incorporated in food such as liquid, paste or solid food.